The Wisconsin Department of Public Instruction

Targeting Student Improvement: Wisconsin's Longitudinal Data System

Today

- What is an LDS?
- Wisconsin's LDS
- Access Manager, a Security Application
- The Multi-Dimensional Analytic Tool (MDAT)
- Getting Started in Your District

Why a Longitudinal Data System?

- U.S.E.D. Institute of Education Sciences State LDS Grant Program
  - DPI awarded a grant in 2005
    - $3 million, 2006-2009
    - Initial development of our LDS following the creation of the WSLS and the first ISES collection
  - DPI awarded a second grant in 2009
    - $5.5 million, 2009-2013
    - Continued development of our LDS
      - Data collections
      - Reporting and Analysis tools

Why Now?

- DPI recently piloted our new reporting tool, MDAT
  - November 16 – December 18
- Race to the Top
  - Places federal and public attention on state data systems

What is a Longitudinal Data System?

What is a Longitudinal Data System?

- A longitudinal data system has many different layers and components
  - Structural framework
  - Access processes (security!)
  - Reporting methods
  - Implementation/Professional development

In Sum…

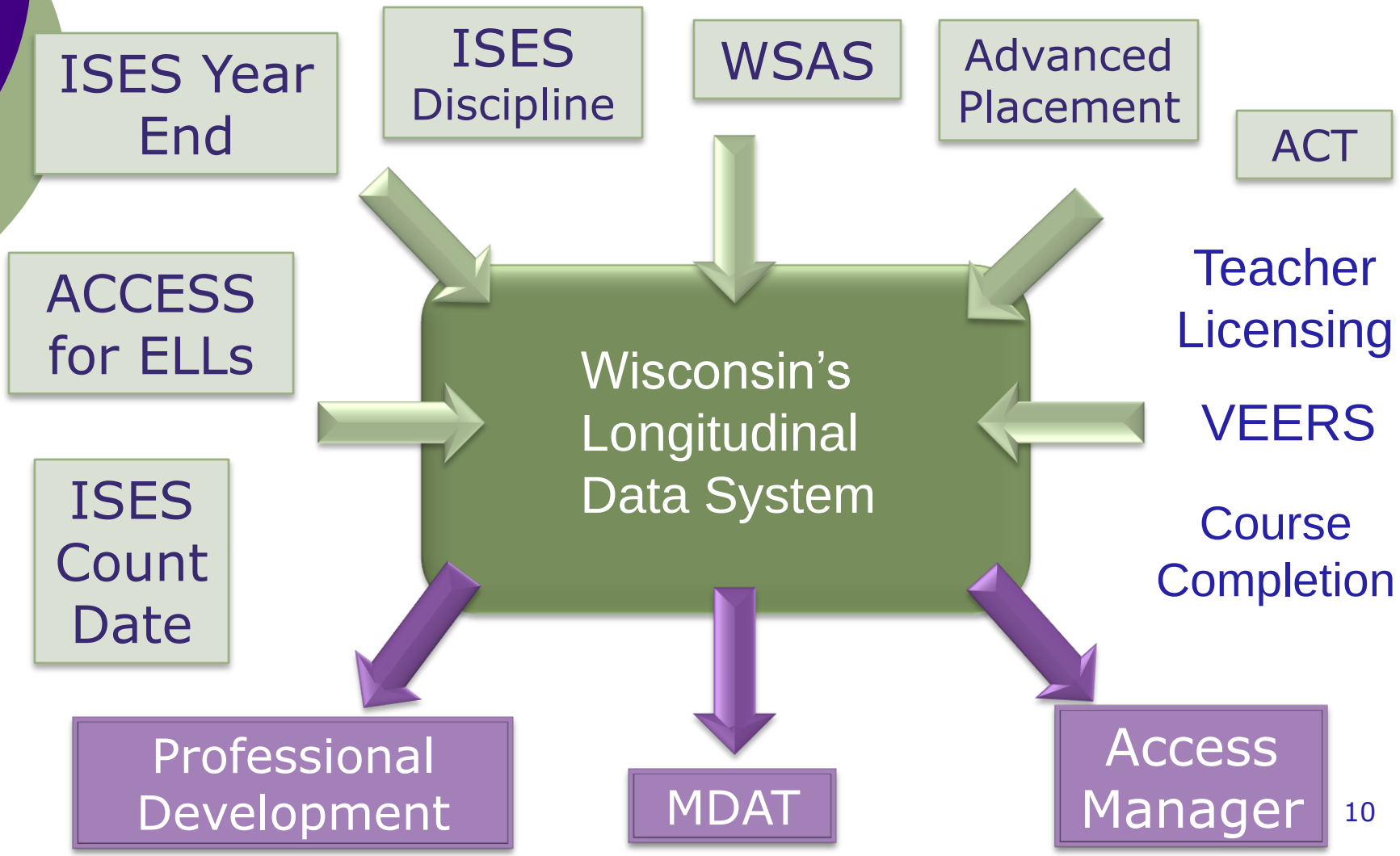
- An education longitudinal data system
  - Collects and maintains detailed, high-quality student- and staff-level data
    - Includes a variety of data collections to create a COMPLETE PICTURE of student performance
  - Links these data to one another across entities (collections or data warehouses) over time
  - Makes these data accessible through reporting and analysis tools

Wisconsin's Longitudinal Data System

Wisconsin's LDS

- The LDS contains many elements:
  - Data Warehouse (structural level)
    - Secure
    - Collects data from a variety of sources
  - Reporting Tools (web-based)
    - MDAT
  - Security Applications
    - Access Manager
  - Professional Development
    - Training Version of MDAT
    - Documents on DPI Website
    - Trainings with CESAs, districts

Wisconsin's Longitudinal Data System



Wisconsin's LDS: Current Applications

- Applications are tools that allow a user to
  - Manage access to certain data
  - Learn more about data or collections
  - Analyze and develop reports using data from the LDS
- DPI has two applications to-date:
  - MDAT: the Multi-Dimensional Analytic Tool
  - Access Manager

Access Manager: A Security Solution

Access Manager: A Security Solution

- Student-level data must be protected.
- Federal and Wisconsin laws protect student privacy.
- MDAT allows authorized users to view student-level information.
- DPI's solution: a security (delegated administration) tool, or Access Manager

The LDS Access Manager: Overview

- Access Manager is a tool of the LDS, one that manages…
  - Who can control access to the applications
  - Who has access to certain applications
  - What a user can see/do within an application (roles)
    - Which groups of district- or school-level student data the user can access

Access Manager

- Only those with administrative rights use access manager
  - District Superintendent
  - District Security Administrator
    - Selected and assigned role by District Superintendent
- Contact your District LDS Security Administrator for rights to use MDAT.

MDAT User Rights: Tiers of Access

- Applications may have different tier structures
- MDAT has five tiers

MDAT User Roles

Roles	Role Description
Tier 1	Student level, all variables, download option
Tier 2	Student-level, all variables
Tier 3	Student-level, no economic indicators
Tier 4	Summary* reports, all variables
Tier 5	Summary* reports, no economic indicators

**The summary reports to which you have access may contain small group sizes, and should therefore be treated as confidential.*

MDAT Tiers: Expected Uses

Roles	Expected Uses
Tier 1	Conduct in-depth analysis; combine MDAT downloads with local data
Tier 2	Repeated short-term access to student-level information
Tier 3	Improvement planning; no legitimate need to know economic status
Tier 4	Need for aggregate student level data, no student-level information necessary (reporting)
Tier 5	Data trainings, basic school-level analysis For CESA staff completing district research, school boards, classroom teachers

Back to MDAT

- Access Manager is used to assign users rights to and roles within applications
  - For now our only application is MDAT
- A little more about MDAT…

MDAT: The Multi-Dimensional Analytic Tool

Multi-Dimensional Analytic Tool

- The first analysis tool of the LDS Project.
- Allows users to display tables and graphs based on a variety of variables and filters to answer questions of their choice.
- Users have access to data and variables based on their User Role.
  - So, some users will be able to drill-down to student-level information.
  - Others will look only at summary data.
- More on Variables and Filters…

Variables vs. Filters

- **Variables**
  - Investigate a relationship.
  - Compare different ideas (e.g. grade level and English proficiency) within a common metric (e.g. one year change in scale score.)
- **Filters**
  - Define which individuals or groups will be included in the analysis.
  - Refine results of your guiding question.

Variables and Filters

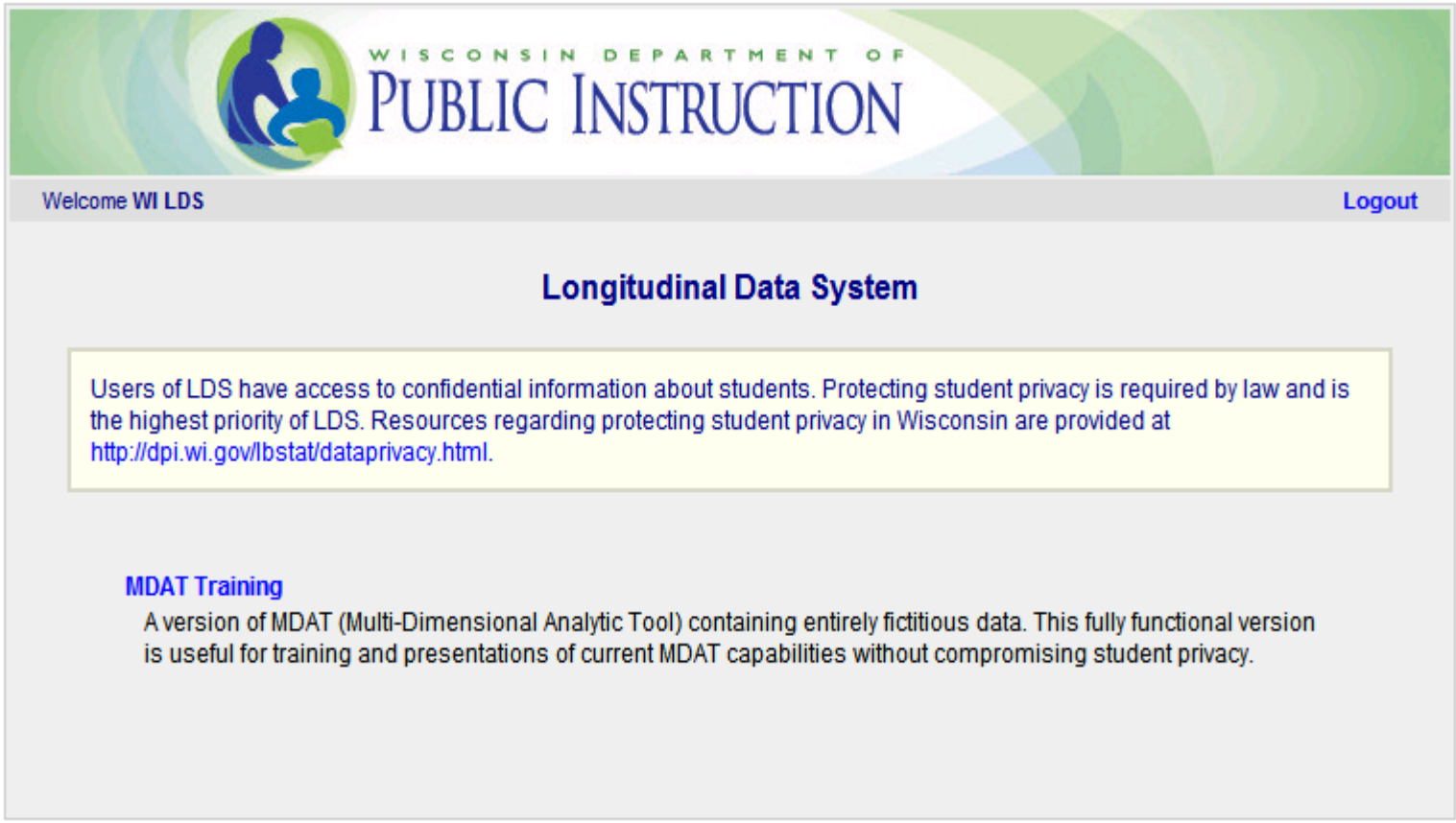
- Users have access to data and variables based on their access level (assigned by the district administrator).
  - Example:
    - Users with Tier 3 or Tier 5 access will not be able to select the filters or variables associated with the economic indicator data.

MDAT Data

- Data Sources:
  - WKCE scores from WKCE results
  - Other data from WSAS and/or ISES:
    - Third Friday of September
    - Year End
    - Discipline Collection
    - Demographic Data
- Application uses three years of WKCE data
  - Shows longitudinal cohort growth from one school year to the following school year.
  - Example: change from 2007-2008 school year (November test) to 2008-2009 school year (November test)

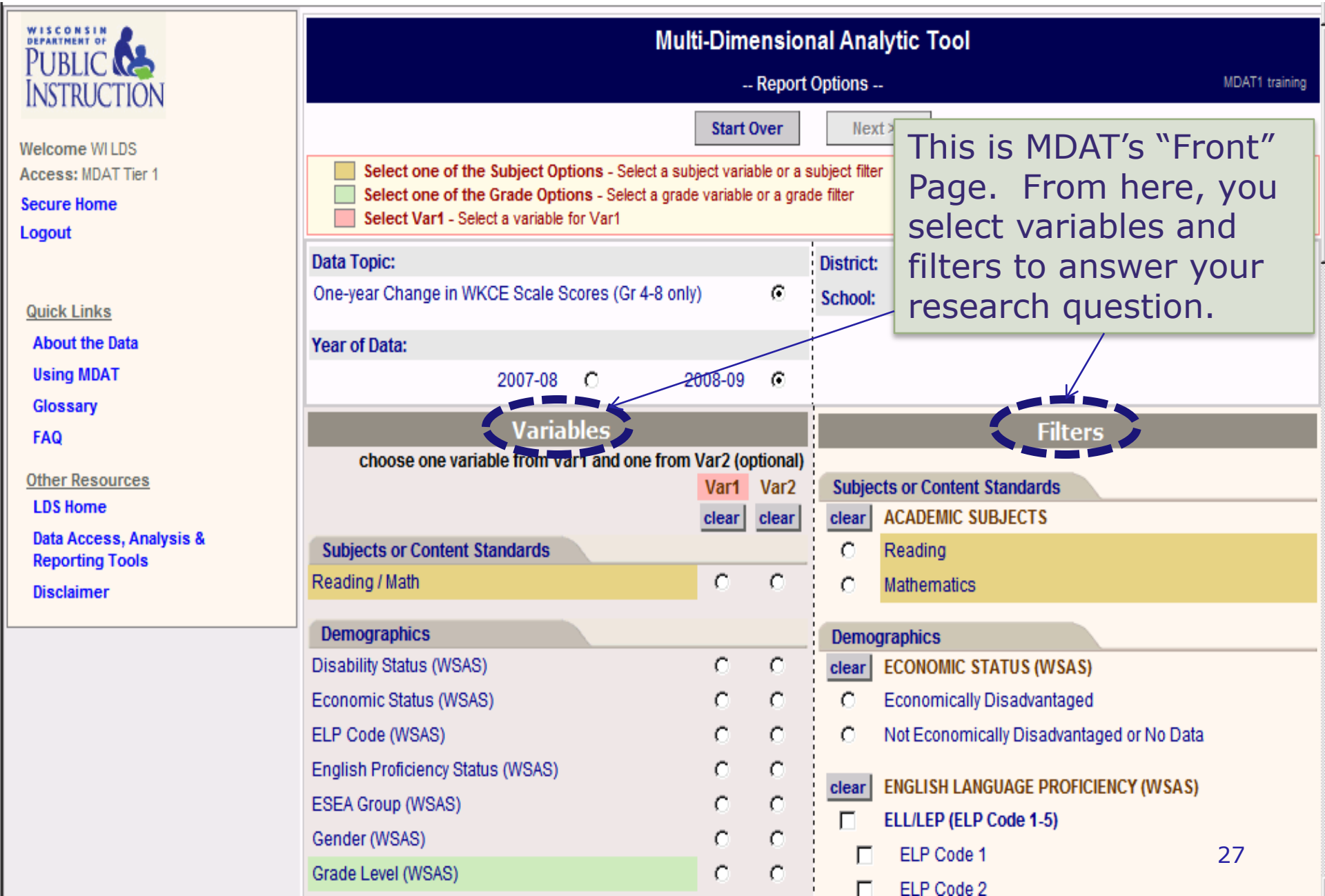
MDAT: A Look at the Application

MDAT: A Look at the Application



This is the LDS landing page.
Select Multi-Dimensional Analytic Tool.

MDAT: A Look at the Application



The LDS Home Page

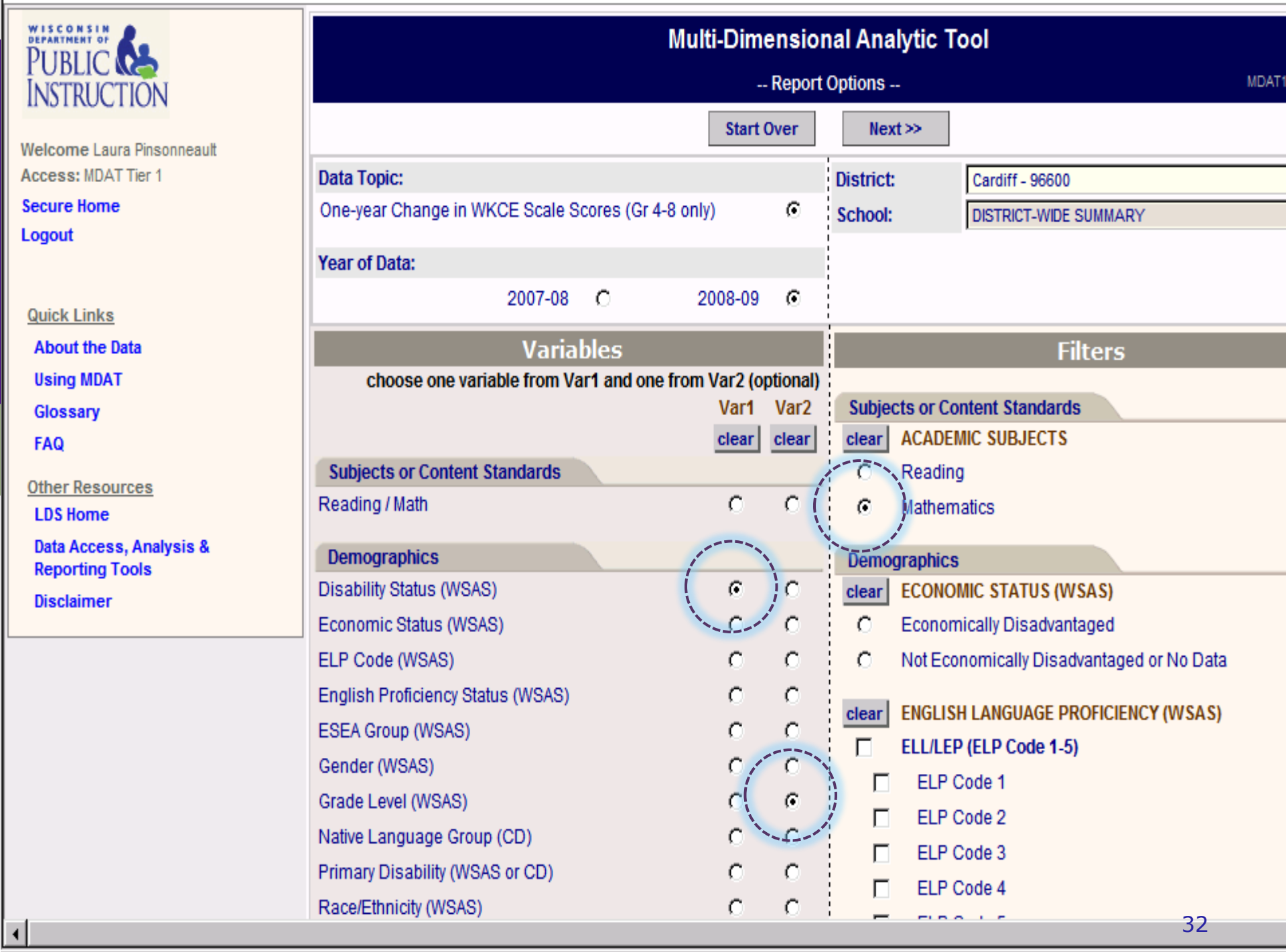
LDS Home Page

- LDS Overview
- Information on different applications of LDS Project
- Step-by-step guides to MDAT and Access Manager
- Information about WAMS
- Directions for getting access to MDAT and Access Manager
- Information about IES Grants

Exploring Student Data with MDAT

Exploring Student Data: Developing a Research Question

- Sample queries on the LDS Home Page
- Our research question:
  - How does the math achievement of students with disabilities compare to non- disabled students at various grades in our district?
    - **Variable 1: Disability status**
    - **Variable 2: Grade level**
    - **Filter 1: Math**


WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION
Welcome Laura Pinsonneault
Access: MDAT Tier 1
Secure Home
Logout
Quick Links
About the Data
Using MDAT
Glossary
FAQ
Other Resources
LDS Home
Data Access, Analysis & Reporting Tools
Disclaimer
Multi-Dimensional Analytic Tool
-- Report Options --
MDAT1
Start Over
Next >>
Data Topic:
One-year Change in WKCE Scale Scores (Gr 4-8 only)
Year of Data:
2007-08
2008-09
District:
Cardiff - 96600
School:
DISTRICT-WIDE SUMMARY
Variables
choose one variable from Var1 and one from Var2 (optional)
Var1
Var2
clear
clear
Subjects or Content Standards
Reading / Math
Demographics
Disability Status (WSAS)
Economic Status (WSAS)
ELP Code (WSAS)
English Proficiency Status (WSAS)
ESEA Group (WSAS)
Gender (WSAS)
Grade Level (WSAS)
Native Language Group (CD)
Primary Disability (WSAS or CD)
Race/Ethnicity (WSAS)
Filters
Subjects or Content Standards
clear
ACADEMIC SUBJECTS
Reading
Mathematics
Demographics
clear
ECONOMIC STATUS (WSAS)
Economically Disadvantaged
Not Economically Disadvantaged or No Data
clear
ENGLISH LANGUAGE PROFICIENCY (WSAS)
ELL/LEP (ELP Code 1-5)
ELP Code 1
ELP Code 2
ELP Code 3
ELP Code 4

Multi-Dimensional Analytic Tool

-- Verify Report Options --

Verify report options and select Change Report Options or Submit.

<< Change Report Options | Submit

District	Cardiff - 96600
School	DISTRICT SUMMARY
Data Topic	One-year Change in WKCE Scale Scores
Year of Data	2008-09

Variables

Variable1	Disability Status (WSAS)
Variable2	Grade Level (WSAS)

Filters

Academic Subject	Mathematics
Economic Status (WSAS)	- None -
English Language Proficiency (WSAS)	- None -
Gender (WSAS)	- None -
Grade Level (WSAS)	- None -
Primary Disability (WSAS or CD)	- None -
Race/Ethnicity (WSAS)	- None -
FAY Status (WSAS)	- None -
Years Enrolled (CD)	- None -
Charter Status	- None -

<< Change Report Options | Submit

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Welcome Laura Pinsonneault
Access: MDAT Tier 1
Secure Home
Logout

Download Options
Download Summary Report

Graph Options
Swap Var1/Var2
Show 2007-08
Zoom In | Zoom Out

Print Version
Having difficulty printing?

Quick Links
About the Data
Using MDAT
Glossary
FAQ

Other Resources
LDS Home
Data Access, Analysis & Reporting Tools
Disclaimer

Multi-Dimensional Analytic Tool

-- Report Results --

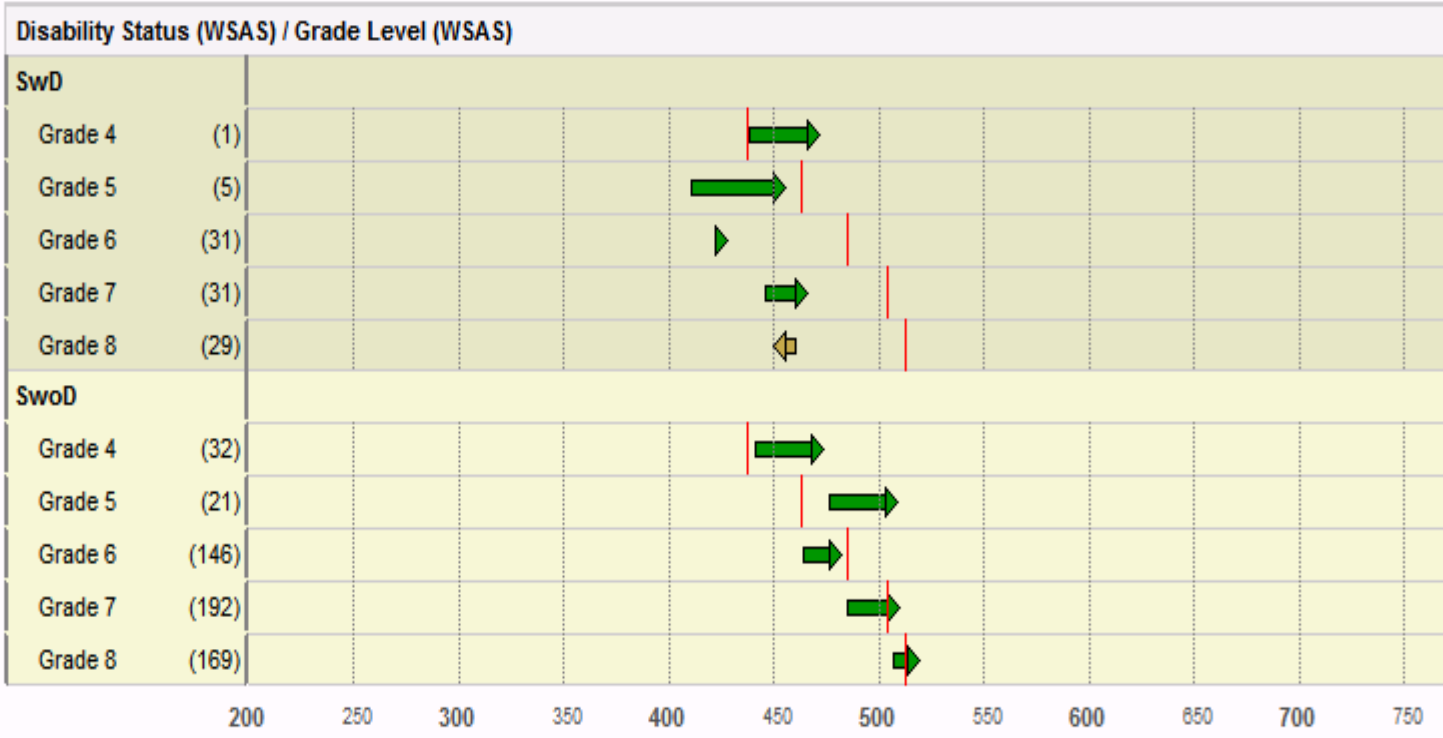
MDAT1

Student details not available for state/district summary.

<< Change Report Options

District:	Cardiff - 96600	School:	DISTRICT SUMMARY
Data Topic:	One-year Change in WKCE Scale Scores	Year of Data:	2008-09
Variable1:	Disability Status (WSAS)	Variable2:	Grade Level (WSAS)
Subject:	Mathematics		

Positive Change | Negative Change | No Change | Prior Yr Score N/A | Selected Yr Score M



Proficient Cut Score: Math — Grade 4: 438 | Grade 5: 463 | Grade 6: 485 | Grade 7: 504 | Grade 8: 513

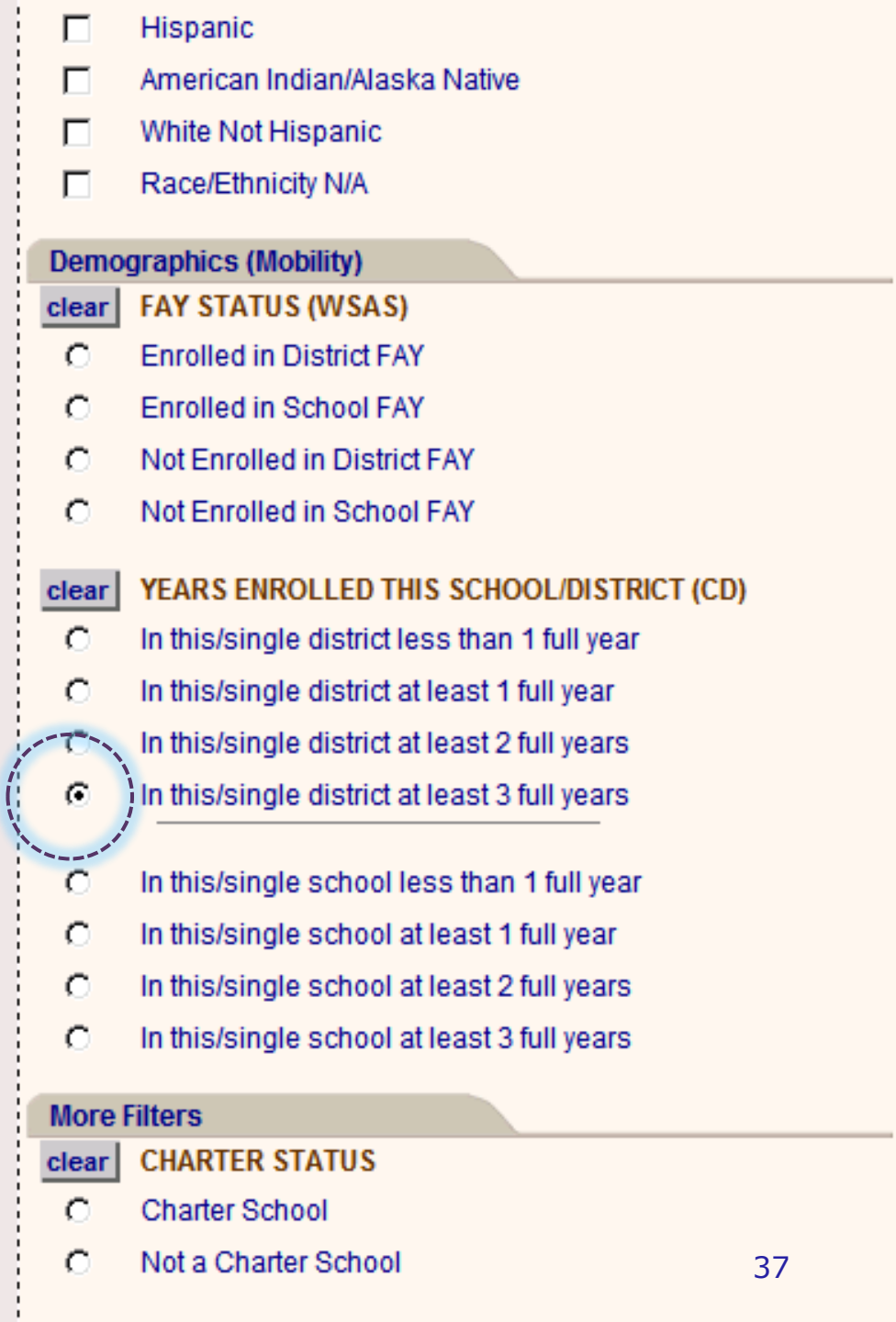
Proficient Cut Score: Math	Grade 4: 438 | Grade 5: 463 | Grade 6: 485 | Grade 7: 504 | Grade 8: 513

Variable 1	Variable 2					
Disability Status (WSAS)	Grade Level (WSAS)	# of Students in Group	# of Students with Scores in Selected Year and Prior Year	Mean Score Prior Year	Mean Score Selected Year	One-Year Change in Score Means
SwD	Grade 4	2	1	439.0	473.0	34.0
	Grade 5	7	5	411.8	457.4	45.6
	Grade 6	45	31	422.9	429.4	6.5
	Grade 7	45	31	446.5	467.3	20.8
	Grade 8	41	29	460.9	449.3	-11.6
SwoD	Grade 4	34	32	441.1	474.3	33.2
	Grade 5	21	21	477.2	510.6	33.4
	Grade 6	159	146	464.2	483.6	19.4
	Grade 7	192	192	485.0	510.3	25.3
	Grade 8	176	169	507.4	520.7	13.3

This report contains confidential data and must be kept secure. It is not for public review or dissemination. Distribution within your district must be in accordance with state and federal privacy laws and local school board policy.

MDAT Example

- How are students with disabilities achieving in math?
- Drill Down:
  - **Do students with disabilities who have attended our district for three or more years perform better than students who have attended for fewer years?**
    - Variable 1: Disability status
    - Variable 2: Grade level
    - Filter1: Math
    - **Filter2: Years enrolled in this district (3 or more)**


Hispanic
American Indian/Alaska Native
White Not Hispanic
Race/Ethnicity N/A
Demographics (Mobility)
clear
FAY STATUS (WSAS)
Enrolled in District FAY
Enrolled in School FAY
Not Enrolled in District FAY
Not Enrolled in School FAY
clear
YEARS ENROLLED THIS SCHOOL/DISTRICT (CD)
In this/single district less than 1 full year
In this/single district at least 1 full year
In this/single district at least 2 full years
In this/single district at least 3 full years
In this/single school less than 1 full year
In this/single school at least 1 full year
In this/single school at least 2 full years
In this/single school at least 3 full years
More Filters
clear
CHARTER STATUS
Charter School
Not a Charter School

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Welcome Laura Pinsonneault
Access: MDAT Tier 1

Secure Home
Logout

Download Options

Download Summary Report

Graph Options

Swap Var1/Var2
Show 2007-08
Zoom In | Zoom Out

Print Version
Having difficulty printing?

Quick Links

About the Data
Using MDAT
Glossary
FAQ

Other Resources

LDS Home
Data Access, Analysis & Reporting Tools
Disclaimer

Multi-Dimensional Analytic Tool

-- Report Results --

MDAT1

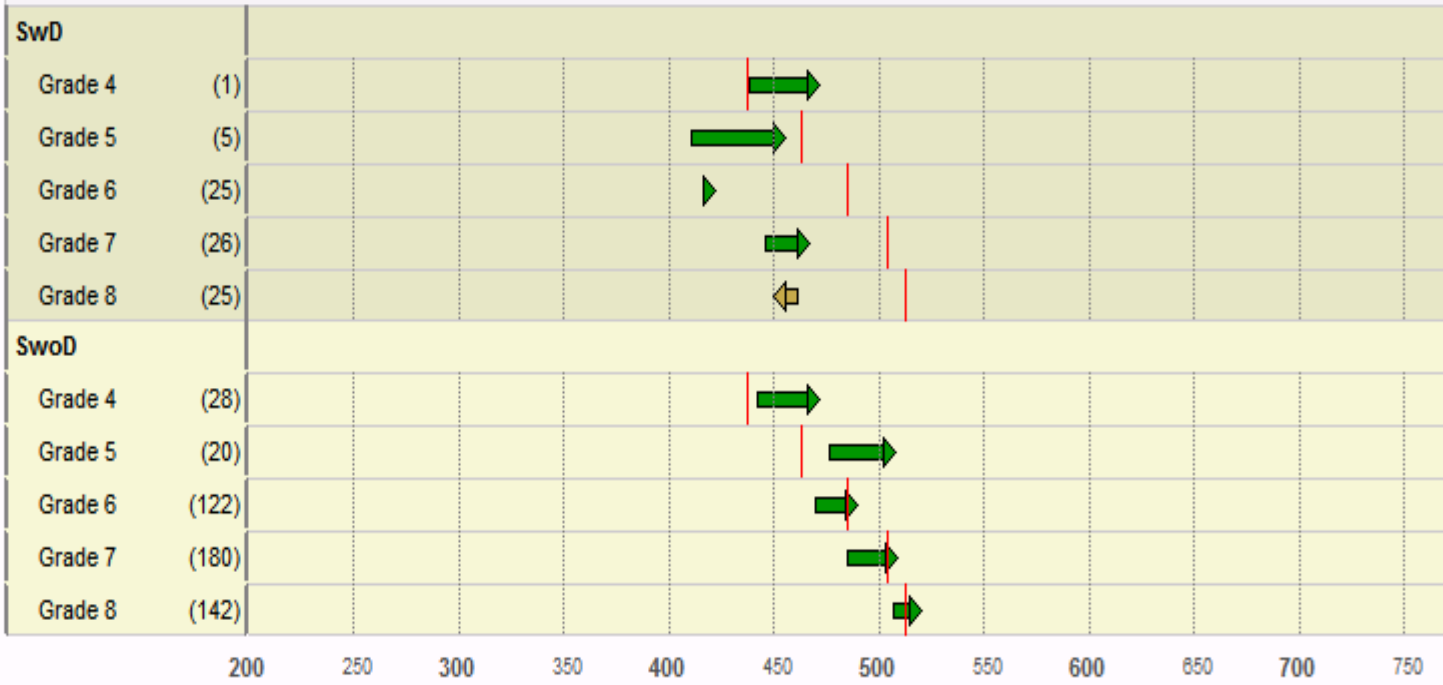
Student details not available for state/district summary.

<< Change Report Options

District:	Cardiff - 96600	School:	DISTRICT SUMMARY
Data Topic:	One-year Change in WKCE Scale Scores	Year of Data:	2008-09
Variable1:	Disability Status (WSAS)	Variable2:	Grade Level (WSAS)
Subject:	Mathematics		
Years Enrolled:	In this/single district at least 3 full years		

Positive Change | Negative Change | No Change | Prior Yr Score N/A | Selected Yr Score N

Disability Status (WSAS) / Grade Level (WSAS)



MDAT Example

- What if we look at the data for a particular school?
  - This will allow us to drill down to the student level.

Secure Home
Logout

Download Options
Download Summary Report

Graph Options
Swap Var1/Var2
Show 2007-08
Zoom In | Zoom Out

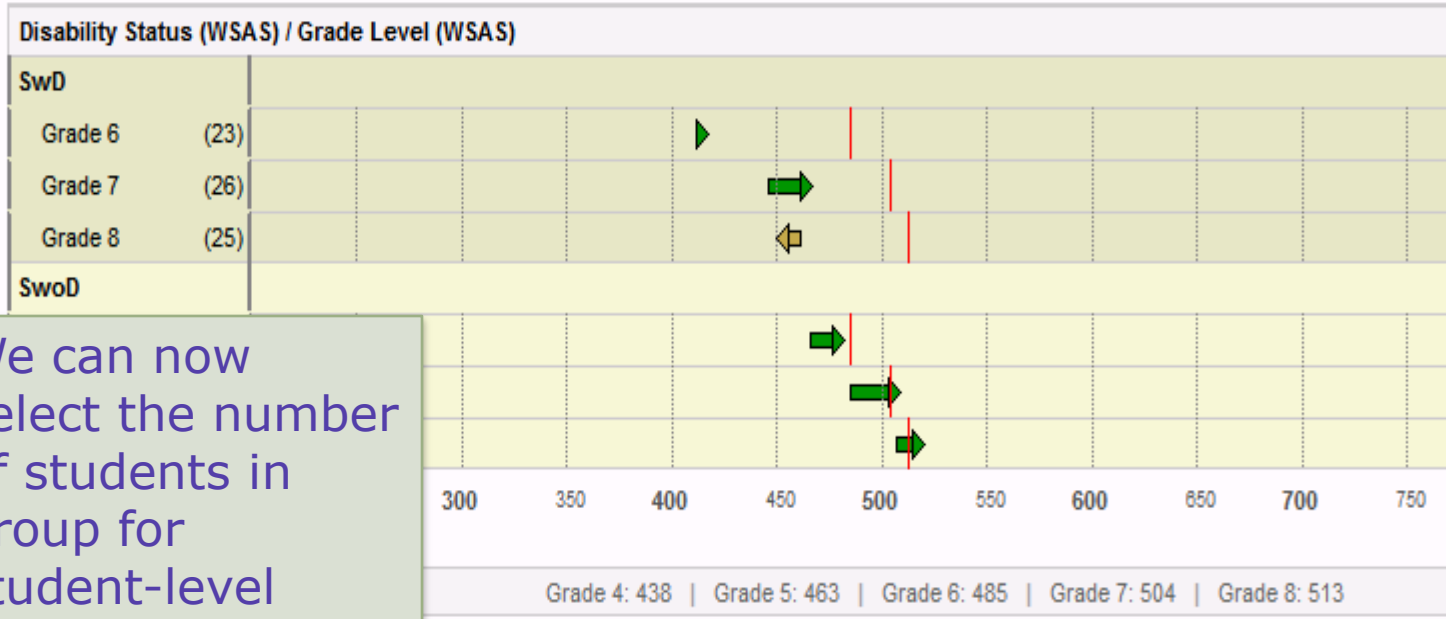
Print Version
Having difficulty printing?

Quick Links
About the Data
Using MDAT
Glossary
FAQ

Other Resources
LDS Home
Data Access, Analysis & Reporting Tools
Disclaimer

District: Cardiff - 96600
School: Bath Mid - 50500
Data Topic: One-year Change in WKCE Scale Scores
Year of Data: 2008-09
Variable1: Disability Status (WSAS)
Variable2: Grade Level (WSAS)
Subject: Mathematics
Years Enrolled: In this/single district at least 3 full years

Positive Change | Negative Change | No Change | Prior Yr Score N/A | Selected Yr Score



We can now select the number of students in group for student-level detail

Disability Status (WSAS)	Grade Level (WSAS)	# of Students in Group	# of Students with Scores in Selected Year and Prior Year	Mean Score Prior Year	Mean Score Selected Year	One-Year Cha in Score Mea
SwD	Grade 6	35	23	414.6	418.9	
	Grade 7	39	26	446.0	467.0	
	Grade 8	35	25	461.3	449.1	
SwoD	Grade 6	100	100	466.4	483.4	
	Grade 7	180	180	485.6	510.1	
	Grade 8	142	142	507.2	522.0	

Welcome Laura Pinsonneault
Access: MDAT Tier 1

Download Student Detail

Tier One users will be able to download this student data

Multi-Dimensional Analytic Tool

-- Student Detail --

The Student Detail Page

<< Close Student Detail

Quick Links

- About the Data
- Using MDAT
- Glossary
- FAQ
- Disclaimer

School: Bath Mid - 50500

Data Topic: One-year Change in WKCE Scale Scores
Year of Data: 2008-09
Variable1: Disability Status (WSAS)
Variable2: Grade Level (WSAS)
Subject: Mathematics
Years Enrolled: In this/single district at least 3 full years

35 students found.

Last Name	First Name	Birth Date	Disability Status (WSAS)	Grade Level (WSAS)	Score Prior Year	Score Selected Year	One-Year Change in Score	Std Err of Score for Selected Year	Prof Category Prior Year	Pr Cate Sele Ye
Bailey	Peter	01-16-1996	SwD	Grade 6	270				Min	
Beakley	Joe	07-22-1997	SwD	Grade 6	391	440	49	16	Min	M
Cat	Betty	05-13-1996	SwD	Grade 6	415	456	41	13	Min	M
Cat	Witch	03-18-1996	SwD	Grade 6	428	420	-8	19	Min	M
Darling	Betty	05-15-1996	SwD	Grade 6		320		58		M
Darling	Elmer	10-02-1996	SwD	Grade 6	369	368	-1	32	Min	M
Duck	Augie	08-22-1996	SwD	Grade 6						
Flintstone	Quick Draw	09-10-1996	SwD	Grade 6						
Glomgold	Baba	12-21-1996	SwD	Grade 6	505	427	-78	18	Adv	M
Glomgold	George	02-14-1996	SwD	Grade 6	394	350	-44	40	Min	M
Glomgold	Joe	04-10-1995	SwD	Grade 6	494	487	-7	11	Prof	Pr
Glomgold	Super	11-22-1996	SwD	Grade 6	416	449	33	14	Min	M
Gonzales	George	04-17-1997	SwD	Grade 6		478		11		Ba
Heathcote	Marvin	06-11-1996	SwD	Grade 6						

Getting Started in Your District

MDAT General Availability

- Begins next week!
- DPI will contact District Superintendents and District Assessment Coordinators this week with information about MDAT.
- Interested in getting rights to MDAT?
  - Follow the steps on page one of your handout.

External Access: First Step

- All external Users will require a WAMS ID to log in to Access Manager or MDAT.
- WAMS = Web Access Management System
- Refer to the WAMS Home Page or the LDS Home Page for more information about WAMS.

External Access

- Initial rights to use Access Manager may be granted only to District Superintendents.
  1. Superintendents complete the Superintendent Authorization Form.
     - If desired, he/she may include information for their District LDS Security Administrator on form.
  2. Email the form to LDShelp@dpi.wi.gov.
  3. DPI sets up the Superintendent (and, if nominated by Superintendent, the District LDS Security Administrator) with rights to use Access Manager.

External Access

4. DPI emails Superintendent and Security Administrator to notify them of setup.
5. Security Administrator manages access to MDAT via Access Manager.

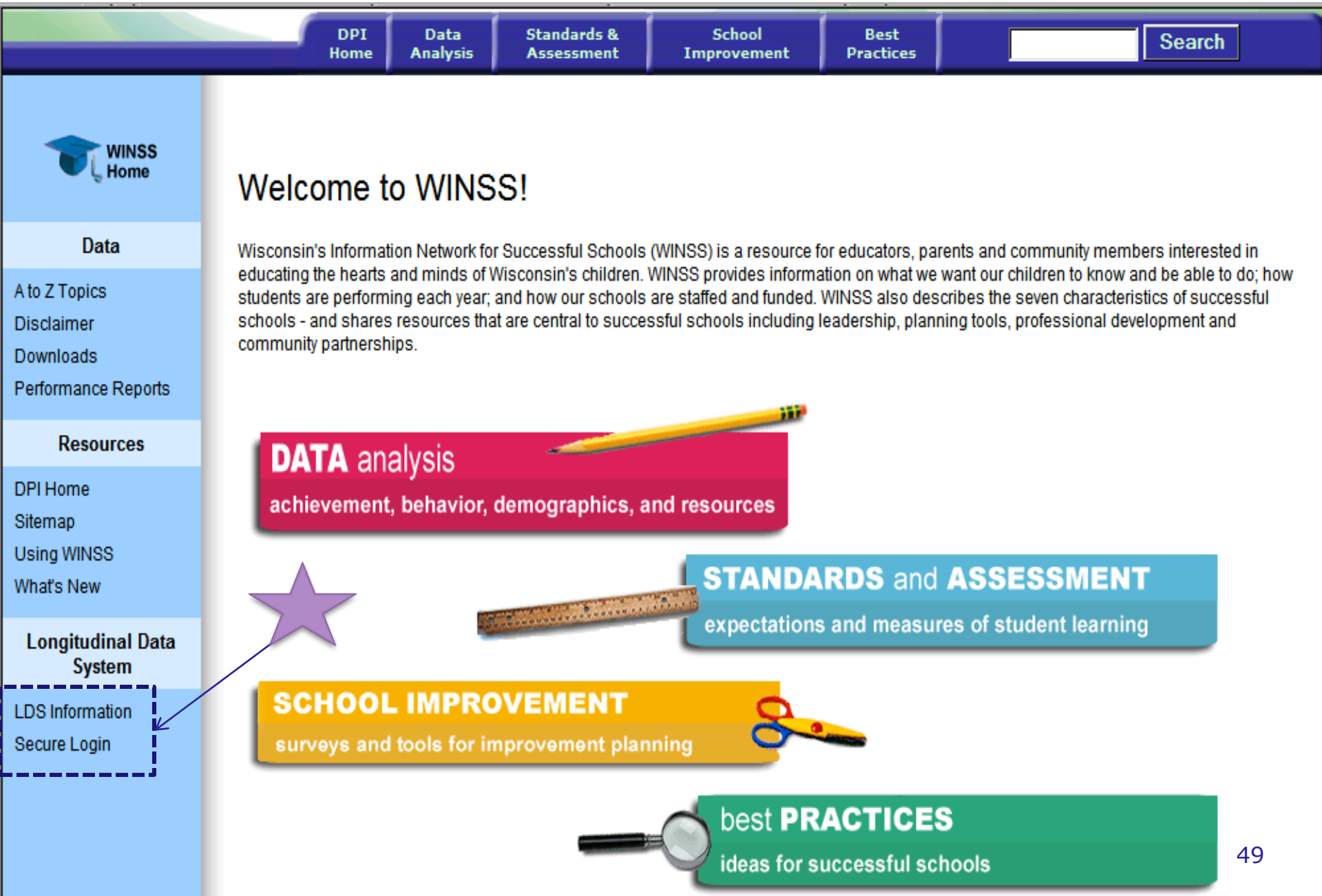
Questions should go to LDShelp@dpi.wi.gov

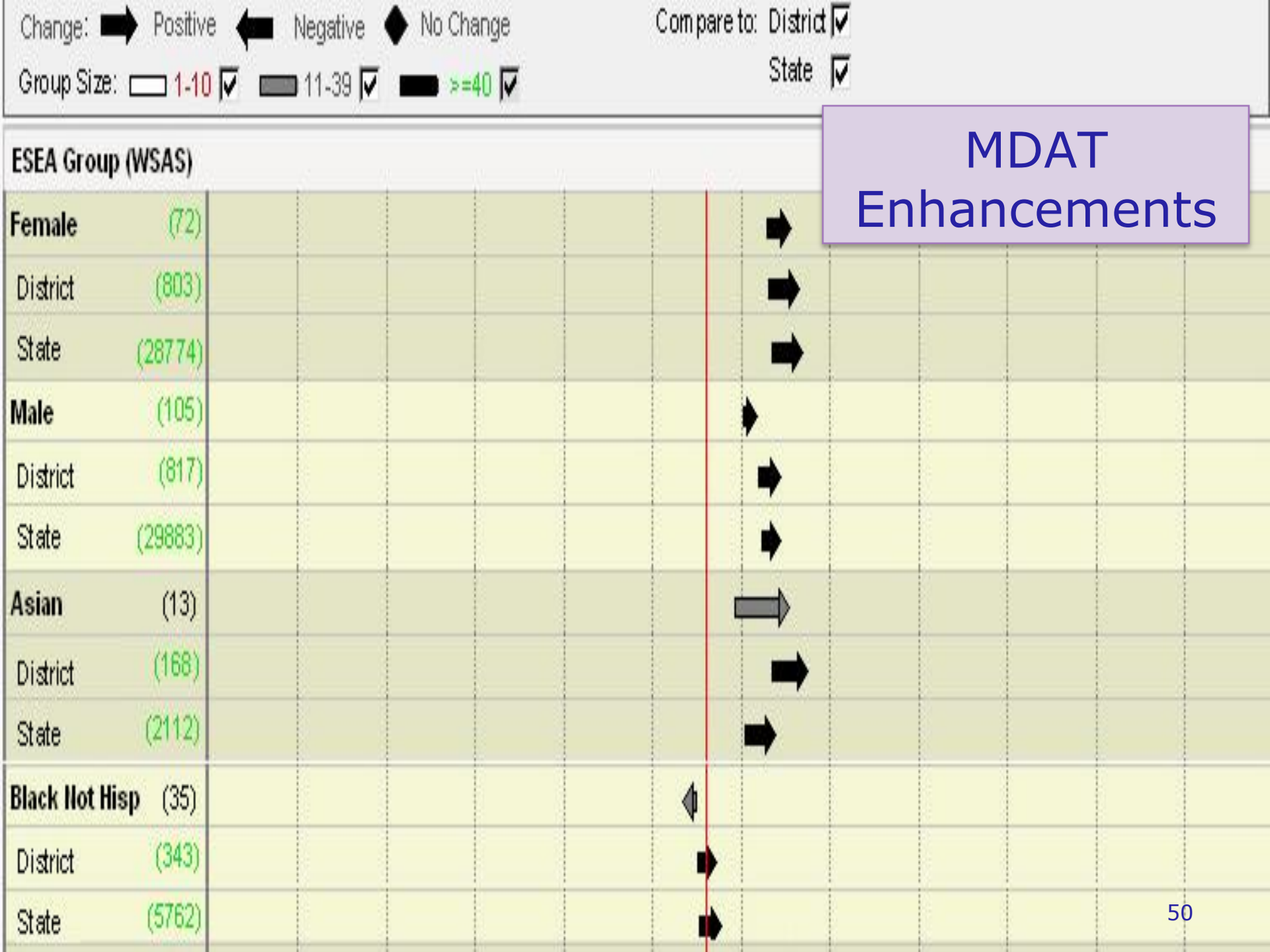
The Future of Wisconsin's LDS

The Future of Wisconsin's LDS

- Wisconsin's LDS will include
  - A New WINSS Home Page
  - Enhancements to MDAT
  - Growth reports (reporting tools)
  - Postsecondary data
    - National Student Clearinghouse

The Future of Wisconsin's LDS





MDAT Enhancements

New Reporting Methods

- Growth Reports
  - OEA commissioned two research studies on growth reporting methods:
    - An Exploration of Seven Growth Models Using the Wisconsin Knowledge and Concepts Examination
      - Harold Doran (AIR), and Doug Bates (UW)
    - Wisconsin Value-Added Model: A Demonstration Project Final Report
      - Rob Meyer, et al (UW-VARC)

The Future of Wisconsin's LDS: Postsecondary Data

- National Student Clearinghouse
  - Non-profit organization
  - Source of student degree and enrollment verification
  - Collects data from over 3,300 postsecondary institutions
    - Nationwide
    - Over 92% of U.S. postsecondary students
    - All types of institutions
      - Public and private
      - Two- and four-year
      - Technical colleges

Questions?

For help, more information…

- Email
  - LDShelp@dpi.wi.gov
- DPI LDS Website
  - http://dpi.wi.gov/lds/index.html
  - More about MDAT and Access Manager
    - Overviews and step-by-step guides to each application